

REMARKS

Claims 1-18 are pending in this application. By this Amendment, claims 1, 6-8, 10 and 12 are amended. Claim 19 is canceled. No new matter is added by this Amendment.

I. Claim Interpretation

The Patent Office alleges that "a desired liquid level" is not a structural limitation, but is instead a reference to provide a relative location of the elements. Applicants respectfully disagree with the Patent Office's allegation that "a desired liquid level" is not a structural limitation.

The desired liquid level is a requisite to the structural location of the flow path and of the discharge inlet of the discharge tube. As such, the desired liquid level clearly defines structural relationships in the equipment, and is thus clearly a structural limitation upon the claims.

II. Rejection Under 35 U.S.C. §112, second paragraph

Claims 1, 10 and 12 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. This rejection is respectfully traversed.

Claims 1 and 10 were rejected as allegedly not being clear if the desired liquid level is the same for the storage vessel and the discharging vessel. Solely to expedite the prosecution of this application, Applicants have amended claims 1 and 10 as suggested by the Patent Office.

Claim 12 was rejected as allegedly being unclear as to what is meant by "integrally formed at a single base material." As suggested by the Patent Office, Applicants have amended claim 12 to recite that the storage vessel, flow path and discharging vessel are integrally formed in a single base material.

Applicants submit that this rejection is now moot. Reconsideration and withdrawal of the rejection are thus respectfully requested.

III. Rejection Under 35 U.S.C. §102(b)

A. Barngrover

Claims 1, 2, 6-11, 15 and 19 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,733,776 ("Barngrover"). This rejection is respectfully traversed.

The Patent Office alleges that Barngrover teaches a media supply vessel (allegedly corresponding to the storage vessel recited in the claims), silicone tubing (allegedly corresponding to the injection tube recited in the claims), an agitation vessel (allegedly corresponding to the discharging vessel recited in the claims), and inlet/outlets (allegedly corresponding to the discharge tube recited in the claims). Applicants respectfully disagree with the Patent Office's allegations.

Even if the Patent Office's allegations of corresponding features were accepted as accurate, Barngrover still does not teach or suggest the liquid treating equipment recited in claims 1 and 10. Claims 1 and 10, as amended, require that the discharge tube include a discharge inlet/discharging inlet mounted above the discharging vessel so that a discharge inlet opens therein in a configuration where a cross section of the inlet is planar with a desired liquid level in the discharging vessel. Barngrover does not teach or suggest that a cross section of the inlet of the discharge tube is planar with a desired liquid level in the discharging vessel. Both tubes of Barngrover are not disposed so that the opening inlets are set to the same level as the desired liquid level in the agitation vessel. See Figure 2 of Barngrover.

Further, Applicants submit that the correspondence between the Barngrover components and the components in the present claims is not accurate. For example, claims 1 and 10 require that a liquid supplying means be connected to the injection tube to supply the liquid into the storage vessel through the injection tube. Thus, if the silicone tubing

according to Barngrover corresponds to the injection tube as alleged by the Patent Office, then the media supply vessel of Barngrover corresponds to the liquid supplying means recited in the claims (not the storage vessel as alleged by the Patent Office), and the agitation vessel according to Barngrover must correspond to the storage vessel recited in the claims (not the discharge vessel as alleged by the Patent Office). The settling vessel or harvest vessel according to Barngrover would then correspond to the discharging vessel recited in the claims.

According to this interpretation of Barngrover, the discharging vessel (settling vessel or harvest vessel) and storage vessel (agitation vessel) do not have the same desired liquid levels and the flow path is not at a depth lower than the desired liquid level as required in claims 1 and 10.

Furthermore, Applicants submit that the discharging inlet as recited in claim 10 corresponds to the outlet of the silicone tubing connecting the settling vessel and harvest vessel. See column 6, lines 6-7 of Barngrover. Thus, the discharging inlet of the tubing of the settling vessel connected to the harvest vessel (see Figure 2 of Barngrover) is not planar with a desired liquid level in the discharging vessel and is not positioned in a central region from all sides of the discharge vessel as required of the discharging inlet recited in claim 10.

For the foregoing reasons, Applicants submit that Barngrover does not teach or suggest all of the features recited in claims 1, 2, 6-11 and 15. Reconsideration and withdrawal of the rejection are thus respectfully requested.

B. Hall

Claims 1, 6-11, 15 and 19 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,915,823 ("Hall"). This rejection is respectfully traversed.

The Patent Office alleges that Hall teaches a first container 12' (allegedly corresponding to the storage vessel recited in the claims), a discharge conduit 48 (allegedly

corresponding to the injection tube recited in the claims), a second container 12" (allegedly corresponding to the discharge vessel recited in the claims), and another discharge conduit 48 (allegedly corresponding to the discharge tube recited in the claims). Applicants respectfully disagree that Hall teaches or suggests the liquid treating equipment recited in claims 1 and 10.

Hall teaches that a mixture of oil and water is charged into container 12' so that the oil and water can be separated from one another. In container 12', since the oil floats on the water, the oil is discharged from outlet 38'. Then, the water is removed with discharge conduit 48 from container 12'. See column 5, lines 46-51 of Hall. In container 12", the removal process is carried out on the water discharged from container 12' in the same manner as in container 12'. In the assembly according to Hall, the outlet means 38' and the discharging conduits 48 are not disposed so that the opening levels are at the same level as the desired liquid level. See column 5, line 25 to column 6, line 17 and Figure 3 of Hall.

Applicants thus submit that Hall does not teach or suggest the discharge tube as recited in claims 1 and 10.

For the foregoing reasons, Applicants submit that Hall does not teach or suggest all of the features recited in claims 1, 6-11 and 15. Reconsideration and withdrawal of the rejection are thus respectfully requested.

IV. Rejections Under 35 U.S.C. §103(a)

A. Barngrover

Claims 3-5 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Barngrover. This rejection is respectfully traversed.

As explained in detail above, Barngrover does not teach or suggest all of the features recited in claim 1. As such, Applicants submit that Barngrover does not teach or suggest all of the features recited in claims 3-5, which directly or indirectly depend from claim 1.

Reconsideration and withdrawal of the rejection are thus respectfully requested.

B. Barngrover in view of Rose

Claims 16-18 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Barngrover in view of U.S. Patent No. 6,551,557 ("Rose"). This rejection is respectfully traversed.

The Patent Office admits that Barngrover does not teach or suggest liquid treating equipment having rotary or positive displacement pumps. The Patent Office thus introduces Rose as allegedly teaching this feature.

However, Rose does not remedy the deficiencies of Barngrover. In particular, Rose does not teach or suggest a discharge tube including a discharge inlet mounted above the discharging vessel so that a discharge inlet opens therein in a configuration where a cross section the inlet is planar with a desired liquid level in the discharging vessel as recited in claim 1.

For the foregoing reasons, Applicants submit that Barngrover and Rose, taken in combination or alone, do not teach or suggest all of the features recited in claims 16-18. Reconsideration and withdrawal of the rejection are thus respectfully requested.

V. Allowable Subject Matter

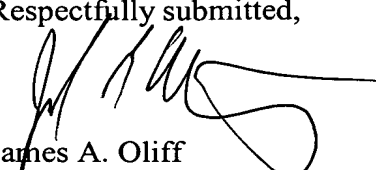
Applicants note with appreciation that claims 12-14 would be in condition for allowance if rewritten to be in independent form.

VI. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-18 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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